

Erosion – Shaping Earth's Landscape

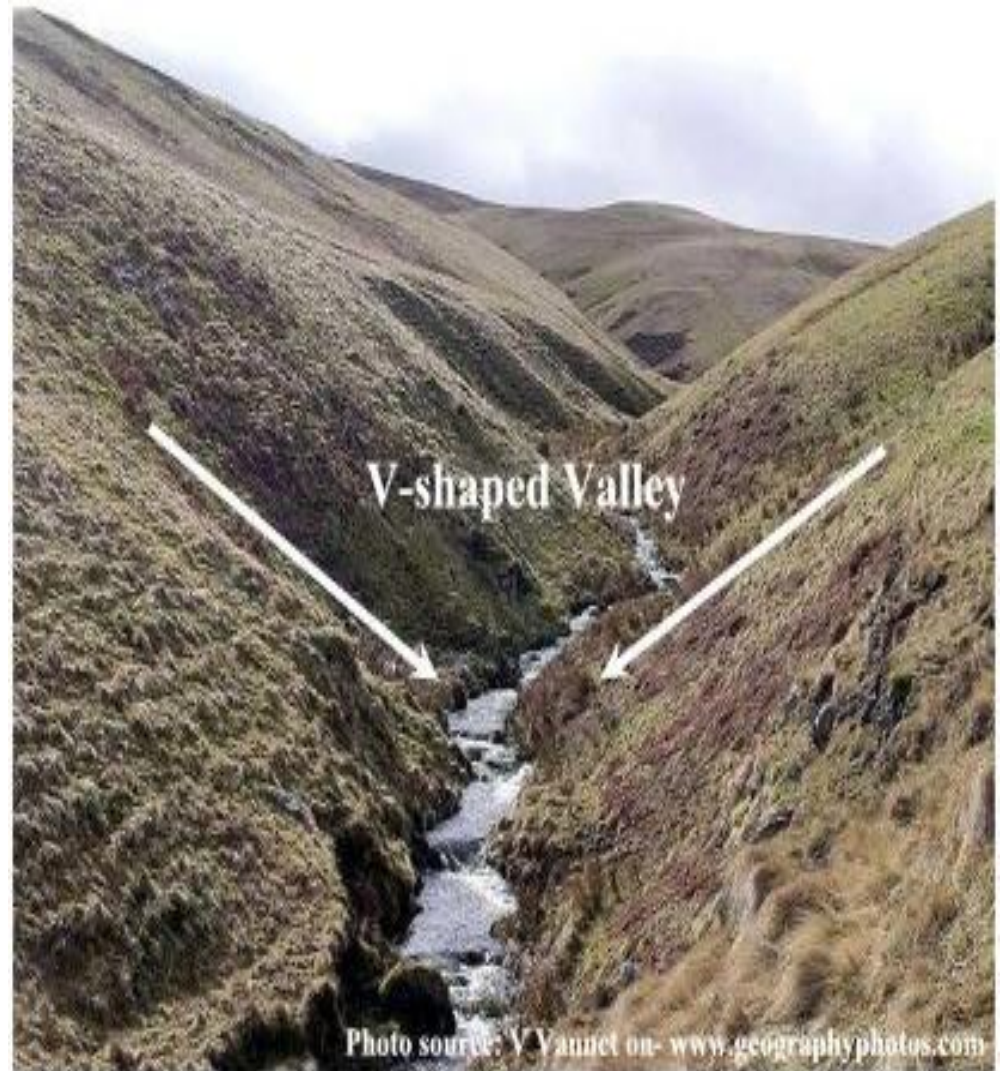
Erosion is the removal and transport of weathered earth materials by natural agents. This material is called sediment. The four main agents of erosion are:

- Moving water
- Glaciers
- Wind
- Gravity



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Moving water is the most powerful agent of erosion.



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When moving water slows down, it drops part of the sediment it is carrying (This is called **deposition**)

- Stream deposits – sand bars that form on bends of a stream or river;



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- Floodplains --
floodplains form as
floodwaters subside and
deposit their sediment

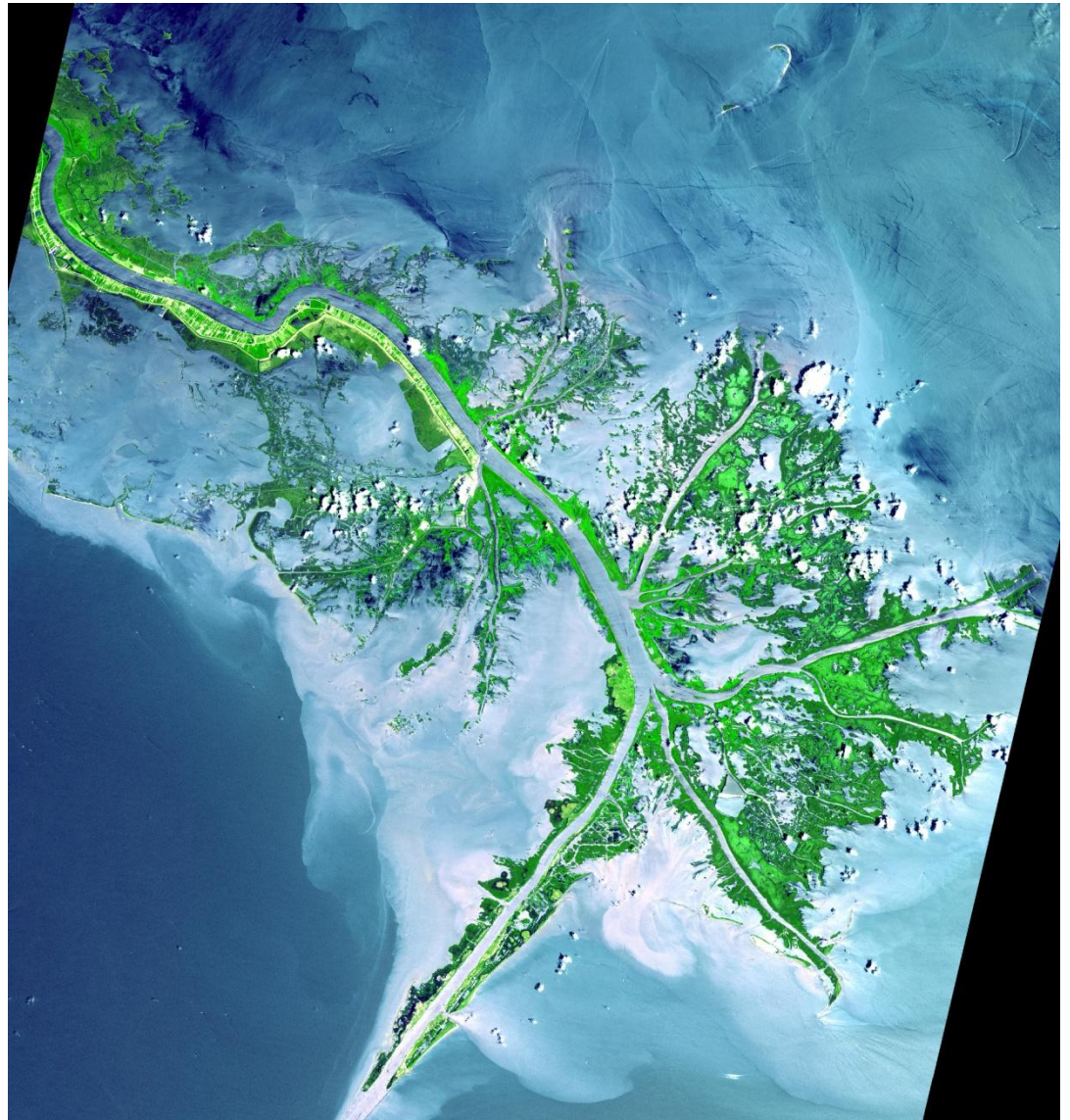
The River Tay and its Floodplain



Photo Source: V Vannet - on www.geographyphotos.com

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- Deltas - deltas form where a stream or river meet a lake or ocean and deposit their sediment. Deltas are often fan shaped.



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Glaciers are large bodies of continuously accumulating ice and compacted snow. They are formed in climates where snow never completely melts, such as high mountain valleys and at the poles.



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Glaciers move downhill under the force of gravity forming U-shaped valleys. As the ice moves it acts like a giant bulldozer, scraping and gouging the soil and surface rocks and boulders.



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Wind can act like a sandblaster, blowing sediment around and polishing and smoothing landforms.



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As the wind's velocity slows down, the sediment it is carrying is dropped and new landforms can be created.



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Wherever the ground slopes, gravity causes soil and rock to fall, slide, or move downhill. This movement is called **mass movement**. When this movement is slow it is called **creep**.

Creep can be noticed by its effects.



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A landslide is the sudden movement of a mass of loose rock down the slope of a hill, mountain, or cliff.



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An **avalanche** is a landslide made from masses of snow, ice, soil, and rock.



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Another kind of landslide is called a **slump**. A slump occurs when small blocks of land tilt and move downhill. Slumps are common on cliffs, steep hills, and roadcuts next to highways.



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The final type of mass movement we'll talk about is called **mud flows**. A mudflow is the rapid movement of a water-saturated mass of clay, silt, rocks, and boulders.

